

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-8. **(Cancelled)**

9. **(Previously Presented)** An optical module comprising:

an active optical component;

an optical fiber arranged with respect to the active optical component to be capable of propagating light along an optical path between the active optical component and the optical fiber;

a beam shaping optical component located in the optical path between the optical fiber and the active optical component;

a positioning device for moving at least one of the beam shaping optical component with respect to the optical fiber, the beam shaping optical component with respect to the active optical component, and the active optical component with respect to the optical fiber; and

a frame to which the optical fiber is affixed, wherein the positioning device comprises a first micro-machined movable stage affixed between the frame and the active optical component, and the positioning device additionally comprises a second micro-machined movable stage affixed between the frame and the beam shaping optical component.

10. **(Previously Presented)** An optical module comprising:

an active optical component;

an optical fiber arranged with respect to the active optical component to be capable of propagating light along an optical path between the active optical component and the optical fiber;

a beam shaping optical component located in the optical path between the optical fiber and the active optical component;

a positioning device for moving at least one of the beam shaping optical component with respect to the optical fiber, the beam shaping optical component with respect to the active optical component, and the active optical component with respect to the optical fiber; and

a frame to which the optical fiber is affixed, wherein the positioning device comprises a first micro-machined movable stage affixed between the frame and the optical fiber and movable in a first direction, and the positioning device additionally comprises a second micro-machined movable stage affixed between the frame and the beam shaping optical component and movable in a second direction transverse to the first direction.

11. (Previously Presented) An optical module comprising:

an active optical component;

an optical fiber arranged with respect to the active optical component to be capable of propagating light along an optical path between the active optical component and the optical fiber;

a beam shaping optical component located in the optical path between the optical fiber and the active optical component;

a positioning device for ~~moving~~ at least one moving of the beam shaping optical component with respect to the optical fiber, moving the beam shaping optical component with respect to the active optical component, and moving the active optical component with respect to the optical fiber; and

a frame to which the optical fiber is affixed, wherein the positioning device comprises a first micro-machined movable stage affixed between the frame and the active optical component, and the positioning device additionally comprises a second micro-machined movable stage affixed between the frame and the optical fiber.

12. (Cancelled)

13. (Currently Amended) An optical module comprising:

an active optical component;

an optical fiber arranged with respect to the active optical component to be capable of propagating light along an optical path between the active optical component and the optical fiber;

a beam shaping optical component located in the optical path between the optical fiber and the active optical component;

a positioning device for ~~moving~~ at least one moving of the beam shaping optical component with respect to the optical fiber, moving the beam shaping optical component with respect to the active optical component, and moving the active optical component with respect to the optical fiber; and

means for holding the positioning device in position while the optical module is uncoupled from any alignment system, wherein the means for holding comprises a position memory circuit operable to control the positioning device.

Claims 14-15. **(Cancelled)**

16. **(Previously Presented)** An optical module comprising:

an active optical component;

an optical fiber arranged with respect to the active optical component to be capable of propagating light along an optical path between the active optical component and the optical fiber;

a beam shaping optical component located in the optical path between the optical fiber and the active optical component;

a positioning device for moving at least one of the beam shaping optical component with respect to the optical fiber, the beam shaping optical component with respect to the active optical component, and the active optical component with respect to the optical fiber; and

means for holding the positioning device in position, wherein the means for holding comprises an adhesive and a micro heater capable of activating the adhesive.

17. **(Cancelled)**

18. **(Previously Presented)** An optical module comprising:

an active optical component;

an optical fiber arranged with respect to the active optical component to be capable of propagating light along an optical path between the active optical component and the optical fiber;

a beam shaping optical component located in the optical path between the optical fiber and the active optical component;

a positioning device for moving at least one of the beam shaping optical component with respect to the optical fiber, the beam shaping optical component with respect to the active optical component, and the active optical component with respect to the optical fiber; and

means for holding the positioning device in position, wherein the means for holding comprises an adhesive capable of activation by exposure to RF radiation.

19. **(Currently Amended)** An optical module comprising:

an active optical component;

an optical fiber arranged with respect to the active optical component to be capable of propagating light along an optical path between the active optical component and the optical fiber;

a beam shaping optical component located in the optical path between the optical fiber and the active optical component;

a positioning device for ~~moving~~ at least one moving of the beam shaping optical component with respect to the optical fiber, moving the beam shaping optical component with respect to the active optical component, and moving the active optical component with respect to the optical fiber; and

means for holding the positioning device in position while the optical module is uncoupled from any alignment system, wherein the means for holding comprises a position memory circuit operable to control the positioning device.

Claims 20-21. **(Cancelled)**

22. **(Previously Presented)** A method of making an optical module comprising:

assembling an active optical component, an optical fiber arranged with respect to the active optical component to be capable of propagating light along an optical path between the active optical component and the optical fiber, a beam shaping optical component located in the optical path between the optical fiber and the active optical

component, and a positioning device capable of moving one of a pair of elements with respect to the other, the pair of elements comprising one of (a) the beam shaping optical component and the optical fiber, (b) the beam shaping optical component and the active optical component and (c) the active optical component with respect to the optical fiber;

aligning to maximize coupling between the optical fiber and the active optical component; and

holding one of the pair of elements in position with respect to the other after aligning by activating an adhesive set by exposure to RF radiation.

23. **(Cancelled)**

24. **(Currently Amended)** A method of making an optical module comprising:

assembling in the optical module a position memory circuit, an active optical component, an optical fiber arranged with respect to the active optical component to be capable of propagating light along an optical path between the active optical component and the optical fiber, a beam shaping optical component located in the optical path between the optical fiber and the active optical component, and a positioning device capable of moving one of a pair of elements with respect to the other, the pair of elements comprising one of (a) the beam shaping optical component and the optical fiber, (b) the beam shaping optical component and the active optical component and (c) the active optical component with respect to the optical fiber;

aligning to maximize coupling between the optical fiber and the active optical component; and

storing alignment data in the position memory circuit so that the optical module is capable of positioning the positioning device according to [a] the position memory circuit after the optical module is uncoupled from any alignment system.

25. **(New)** An optical module according to claim 16, wherein the optical module is separable from any alignment system.

26. (New) An optical module according to claim 16, wherein the adhesive is capable of irreversibly binding the positioning device in position after the adhesive is activated by the micro heater.